	Application No.	Applicant(s)
Notice of Allowability	09/574,411	YOKOYAMA ET AL.
	Examiner	Art Unit	
	Erick Rekstad	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *Amendment filed January 7, 2005.*

2. ☒ The allowed claim(s) is/are *1,3,4,6,7,9-13,15,16 and 18.*

3. ☒ The drawings filed on *21 August 2000* are accepted by the Examiner.

4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some*   c) ☐ None   of the:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
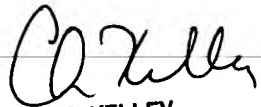
    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

    Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☐ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

DETAILED ACTION

This is an Allowance for application no. 09/574411 in response to the

amendment filed on January 7, 2005 in which claims 1, 3, 4, 6, 7, 9-13, 15, 16, and 18

are presented for examination.

Allowable Subject Matter

Claims 1, 3, 4, 6, 7, 9-13, 15, 16 and 18 are allowed.

The following is an examiner's statement of reasons for allowance:

The claims pertain to a novel method and apparatuses for coding video that the

examiner was unable to find in several prior art searches.

In regards to the apparatus of independent claim 1 and method of independent

claim 12, Uz teaches the use of a rate controlling method for an MPEG encoding

system (Col 1 Lines 8-13 and Lines 18-19). Uz further teaches the use of a decision

circuitry (controller) for determining a magnitude of motion (average motion) of said

input frames relative to said reference frames and a time-varying rate of change

(deviation from average) of said magnitude of motion derived from said magnitude of

motion (Col 11 Lines 18-33, Fig. 1B). Uz further teaches the determining an interval

between successive frames of said predictive coded pictures (scene change) according

to the magnitude of motion and the time-varying rate of said magnitude, and reordering

said input frames according to the determined interval (Col 11 Lines 29-48). Uz does

not teach the MPEG encoding system is an encoding/decoding system. As shown in

Figure 1, Hatano teaches it is well known in the art that an MPEG encoder is both an

encoder and decoder (Col 1 Lines 16-49). It would have been obvious to one of

ordinary skill in the art at the time of the invention that the MPEG encoding system of Uz

is also a decoder as taught by Hatano. Uz and Hatano do not teach "determining an

interval between successive frames of said predictive coded picture so that the

determined interval varies inversely with the determined magnitude of motion and the

determined time-varying rate of change of said magnitude, and reordering said input

frames following said intra-frame coded picture according to the determined interval."

In regards to the apparatus of independent claim 4, Uz teaches the uses of an

input buffer to hold the incoming video sequence (Col 8 Lines 3-5). As shown in Figure

1B, Uz further teaches the uses of a motion estimation unit (70) for determining motion

vectors (Col 7 Lines 60-62), a coding/decoding circuitry (80) for providing motion-

compensated inter-frame prediction and a controller (90) for mean value calculation and

time-varying rate of change calculation. The controller further determines an interval

(scene change) between successive frames of said predictive coded pictures according

to the calculations (Col 1 Lines 36-67, Col 11 Lines 18-33). Uz does not teach the

second memory for storing a reference frame. Hatano teaches the uses of a memory

(16, Fig. 1) for storing reference frames for motion vector detection as a well known part

of an MPEG encoder (Col 29-35). The MPEG encoder further comprises a motion-

compensation unit (17), a subration unit (10), encoding circuity (11, 12 and 19), a

decoding circuity (13 and 14) and a summing circuity (15) as required by claims 10 and

11. It would have been obvious to one of ordinary skill in the art at the time of the

invention that the MPEG encoder of Uz contains a second memory as Hatano teaches

that the second memory is well known in the art. Uz and Hatano do not teach the

"determing an interval between successive frames of said predictive coded picture so that determined interval varies inversely with calculated mean value and the calculated time-varying rate of change of said mean value, and modifying said control signal according to the determined interval so that said input frames following the intra-frame coded picture are reordered." These features taken with the others in the claims define over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Rekstad whose telephone number is 571-272-7338. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

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